

Listing of Claims

1. (Currently Amended) A method of driving a plasma display panel, comprising:
  - selecting an operation mode on a basis of a motion extent of a data; and
  - controlling a sub-field arrangement arranged within one frame interval differently in response to said selected operation mode, said frame interval including a plurality of selective erasing sub-fields and a plurality of selective writing sub-fields, wherein said controlling includes:
    - setting a number of selective erasing sub-fields to be larger than a number of selective writing sub-fields in a first operation mode, and
    - setting a number of selective writing sub-fields to be larger than a number of selective erasing sub-fields in a second operation mode, wherein a total number of sub-fields in the frame interval the first mode of operation equals a total number of sub-fields in the frame interval of the second mode of operation.
2. (Previously Presented) The method as claimed in claim 1, further comprising: receiving at least one of a signal from a remote controller for remotely controlling the plasma display panel, a cable signal connected to a different media and a signal from a mode selection switch provided separately at the plasma display panel.
3. (Previously Presented) The method as claimed in claim 2, wherein selecting the operation mode includes: determining said operation mode in response to said received signal.

4. (Previously Presented) The method as claimed in claim 1, wherein selecting the operation mode includes:

comparing said data between frames to calculate a variation amount, and then comparing said variation amount with a desired reference value, thereby selecting said operation mode.

5. (Previously Presented) The method as claimed in claim 1, wherein the selective writing sub-fields are for selecting on-cells in an address period and the selective erasing sub-fields are for selecting off-cells in the address period.

6. (Previously Presented) The method as claimed in claim 1, wherein said controlling includes: if said first operation mode is an AV mode in which a motion extent of said data is large, then setting the number of selective erasing sub-fields to be larger than the number of selective writing sub-fields.

7. (Previously Presented) The method as claimed in claim 1, wherein said controlling includes: if said second operation mode is a PC mode in which a motion extent of said data is small, then setting the number of selective writing sub-fields to be larger than the number of selective erasing sub-fields.

8. (Previously Presented) The method as claimed in claim 1, wherein differently

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controlling at least one of said sub-field arrangement and the number of sustaining pulses includes:

if said first operation mode is an AV mode in which a motion extent of said data is large, then setting the number of selective erasing sub-fields to be greater than the number of selective writing sub-fields to reduce contour noise at a moving picture relative to the second operation mode, and

if said second operation mode is a PC mode in which a motion extent of said data is small, then setting the number of selective writing sub-fields to be larger than the number of selective erasing sub-fields to increase a gray level expression range relative to the first operation mode.

9. (Previously Presented) A method of driving a plasma display panel, comprising:  
selecting an operation mode on a basis of a motion extent of a data; and  
controlling a number of sustaining pulses within a frame interval differently in response to said selected operation mode, wherein differently controlling the number of sustaining pulses includes:

if said operation mode is selected to be a PC mode in which a motion extent of said data is small relative to an AV mode, then the number of sustaining pulses within the frame interval is reduced to be smaller than a number of sustaining pulses set in correspondence with the AV mode in which a motion extent of said data is large relative to the PC mode, wherein the

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reduction in the number of sustaining pulses in PC mode is set to reduce average brightness to within a predetermined range relative to average brightness achieved during AV mode.

10. (Previously Presented) The method as claimed in claim 9, wherein, in PC mode, the number of sustaining pulses is reduced such that said data is displayed at an average brightness falling in the range of 50% through 80% with respect to an average brightness of said data displayed on the plasma display panel in AV mode in which a motion extent of said data is large.

11. (Currently Amended) A driving apparatus for a plasma display panel, comprising:  
a mode selector for selecting an operation mode on a basis of a motion extent of a data; and

a controller for controlling a sub-field arrangement arranged within one frame interval differently in response to said selected operation mode, said frame interval including a plurality of selective erasing sub-fields and a plurality of selective writing sub-fields, said controller:

setting a number of selective erasing sub-fields to be larger than a number of selective writing sub-fields when the mode selector selects a first operation mode, and

setting a number of selective writing sub-fields to be larger than a number of selective erasing sub-fields when the mode selector selects a second operation mode, wherein a

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total number of sub-fields in the frame interval the first mode of operation equals a total number of sub-fields in the frame interval of the second mode of operation.

12. (Original) The driving apparatus as claimed in claim 11, wherein said mode selector receives at least one of a signal from a remote controller for remotely controlling the plasma display panel, a cable signal connected to a different media and a signal from a mode selection switch provided separately at the plasma display panel, and determines said operation mode in response to said received signal.

13. (Original) The driving apparatus as claimed in claim 11, wherein said mode selector compares said data between frames to calculate a variation amount and then compares said variation amount with a desired reference value, thereby selecting said operation mode.

14. (Previously Presented) The driving apparatus as claimed in claim 11, wherein the selective writing sub-fields are for selecting on-cells in an address period and the selective erasing sub-fields are for selecting off-cells in the address period within said one frame interval; and if said first operation mode selected by the mode selector is an AV mode in which a motion extent of said data is large, the controller sets the number of selective erasing sub-fields to be larger than the number of selective writing sub-fields.

15. (Previously Presented) The driving apparatus as claimed in claim 11, wherein the

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selective writing sub-fields are for selecting on-cells in an address period and the selective erasing sub-fields are for selecting off-cells in the address period within said one frame interval; and

if said second operation mode selected by the mode selector is an PC mode in which a motion extent of said data is small, the controller sets the number of selective writing sub-fields to be larger than the number of selective erasing sub-fields.

16. (Previously Presented) The driving apparatus as claimed in claim 11, wherein:

if said first operation mode selected by the mode selector is an AV mode in which a motion extent of said data is large, then said controller sets the number of selective erasing sub-fields to be greater than the number of selective writing sub-fields to reduce contour noise at a moving picture relative to the second operation mode;

if said second operation mode selected by the mode selector is an PC mode in which a motion extent of said data is small, then said controller sets the number of selective writing sub-fields to be larger than the number of selective erasing sub-fields to increase a gray level expression range relative to the first operation mode.

17. (Previously Presented) A driving apparatus for a plasma display panel, comprising:

a mode selector to select an operation mode based on motion extent of data; and  
a controller to control a number of sustaining pulses within a frame interval differently in response to said selected operation mode, wherein if said operation mode selected

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by the mode selector is an PC mode in which a motion extent of said data is small relative to an AV mode, then said controller controls the number of sustaining pulses to be smaller than a number of sustaining pulses set in correspondence with the AV mode in which a motion extent of said data is large relative to the PC mode, wherein the reduction in the number of sustaining pulses in PC mode is set to reduce average brightness to within a predetermined range relative to average brightness achieved during AV mode.

18. (Previously Presented) The driving apparatus as claimed in claim 17, wherein, in PC mode, the number of sustaining pulses is reduced such that said data is displayed at an average brightness falling in the range of 50% through 80% with respect to an average brightness of said data displayed on the plasma display panel in AV mode in which a motion extent of said data is large.

19. (Previously Presented) The method as claimed in claim 1, wherein setting the number of selective erasing sub-fields to be larger than the number of selective writing sub-fields corresponds to a first number of gray levels that are capable of being generated, and wherein setting the number of selective writing sub-fields to be larger than the number of selective erasing sub-fields corresponds to a second number of gray levels that are capable of being generated, the second number of gray levels being greater than the first number of gray levels.

20. (Previously Presented) The method as claimed in claim 1, wherein the selective writing sub-fields select on cells using binary coding and the selective erasing sub-fields select off cells using linear coding, and wherein a number of gray levels capable of being generated by the selective erasing sub-fields using linear coding is less than a number of gray levels capable of being generated by the selective writing sub-fields.

21. (Previously Presented) The method as claimed in claim 1, wherein a last one of the selective erasing subfields does not have a reset period and other ones of the selective writing sub-fields have a reset period.

22. (Previously Presented) The method as claimed in claim 1, wherein a last one of the selective writing sub-fields does not have an erasure period and other ones of the selective writing sub-fields has an erasure period.